

**REMARKS**

**I. Introduction**

Claims 1-17 are all the claims pending in the application. Claims 1-17 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. Additionally, claims 4-16 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant overcomes the § 112, first paragraph and second paragraph, rejections as follows.

**II. Claim Rejections -- 35 U.S.C. § 112, First Paragraph**

Claims 1-17 stand rejected under § 112, first paragraph, as allegedly failing to comply with the enablement requirement. The Examiner alleges that the claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Specifically, the Examiner alleges that "it is unclear from the specification whether the second antenna simultaneously receives the retransmitted signals from the first antennas of the sensor units when the sensor units are used in three phase distribution bay" (*see* Office Action, page 2). Thus, the Examiner asks "if it does, how can the processing means recognize which

sensor units provide those signals in order for the processing means to analyze the detected signals properly for each sensor unit" (*see* Office Action, page 2)?

The Examiner's rejection of claims 1-17 under § 112, first paragraph, are obviated for at least the following exemplary reasons.

For example, Applicant's specification discloses that a sensor unit 10 includes a temperature sensor 12, a radio antenna 15 and a circuit 16 (page 3, line 32 to page 5, line 4). The circuit 16 includes means for modulating the amplitude of a received radio signal as a function of a state of the sensor 12 (page 4, lines 23-38). Furthermore, the circuit 16 includes means for modulating the amplitude of the radio signal as a function of an address or identity data specific to the sensor unit and, for example, made up of an N-bit word, where N lies in the range of 96 to 128 (page 4, lines 28-31).

In this manner, a transceiver unit 20 can receive the thus modulated and retransmitted wave and produce a binary signal  $\text{sgn}(12)$  representative of the state of the sensor 12, with this signal being associated with an address  $\text{Id}(12)$  of the sensor 12 that corresponds to the aforementioned N-bit word (page 5, lines 28-36). Thus, a receiver and demodulator unit 24 of the exemplary embodiment described in Applicant's specification can recognize/identify a particular sensor unit 10 providing a modulated and retransmitted radio wave.

Consequently, contrary to the Examiner's allegations, the subject matter of claims 1-17 is clearly enabled in view of the disclosure in Applicant's specification, which contains "a written description of the invention, and of the manner and process of making and using it, in such full,

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clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same", as required by § 112, first paragraph.

Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claims 1-17 under § 112, first paragraph.

### **III. Claim Rejections -- 35 U.S.C. § 112, Second Paragraph**

Claims 4-16 stand rejected under § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Specifically, the Examiner alleges that in claims 4-5 and 10, "it is unclear how the power supply source is interrelated and associated with the transceiver unit, signal processing means and the second radio antenna" (*see* Office Action, page 2).

Claim 4 recites, *inter alia*, "a transceiver unit placed outside the equipment and having a second radio antenna for emitting a radio wave to illuminate the first antenna, a power supply source, and signal processing means connected to the second antenna" (*see also* claims 5 and 10). Thus, claim 4 recites a transceiver unit (placed outside the equipment) having a second radio antenna, a power supply source and signal processing means. These features of claim 4 are sufficiently definite to particularly point out and distinctly claim the subject matter which the Applicant regards as his invention, in compliance with § 112, second paragraph.

Furthermore, it may assist the Examiner's understanding to consider the exemplary embodiment illustrated in Applicant's Fig. 2, in which a transceiver element 20 includes a power supply source 25 for providing power therein.

With respect to claim 10, the Examiner alleges that "it is unclear whether the transceiver unit is capable to receive retransmitted signals from the sensors units from a three phase distribution bay" (*see* Office Action, page 2). Applicant respectfully disagrees with the Examiner's allegation.

As noted in Applicant's specification, for example, a medium voltage distribution bay comprises a set of conductive busbars for each phase, with one such busbar being referenced in Applicant's Fig. 1. A sensor unit 10 for continuously monitoring the illustrated busbar 1 is also shown in Applicant's Fig. 1.

Indeed, claim 10 is directed to an apparatus for monitoring high or medium voltage electrical equipment, such as a three-phase distribution bay, and recites, *inter alia*, "at least one sensor unit per phase". Claim 10 also recites a transceiver unit having signal processing means, wherein the signal processing means is arranged to supply for each sensor unit, a signal  $sgn(12)$  indicative of the state of the sensor together with associated identity information  $Id(12)$ .

Thus, these exemplary features of claim 10 are sufficiently definite to particularly point out and distinctly claim the subject matter which the Applicant regards as his invention, in compliance with § 112, second paragraph. Furthermore, in view of the above, it is clear that the

transceiver unit is capable of receiving retransmitted signals from the sensor units located in a three-phase distribution bay.

Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claims 4-16 under § 112, second paragraph.

#### **IV. Drawings**

The Examiner objects to the drawings under 37 C.F.R. § 1.83(a) as allegedly failing to show every feature of the invention specified in the claims (*see* Office Action, page 3). In particular, the Examiner alleges that the "processing means" recited in claims 4, 5 and 10 must be shown or canceled from the claims (*see* Office Action, page 3).

Applicant amends claim 4 to further clarify that the "processing means" refers to the earlier recited "signal processing means" (*see also* claims 5 and 10). As noted in claim 4, the signal processing means is connected to the second antenna so as to be operable to receive the amplitude-modulated radio wave retransmitted toward the second antenna by the first antenna (*see also* claims 5 and 10). Claim 4 further recites that the processing means is arranged to provide a signal related to the determined physical parameter (*see also* claims 5 and 10).

Contrary to the Examiner's allegation, the "signal processing means" of claims 4, 5 and 10 are illustrated in the drawings. For example, Applicant's Fig. 1 sufficiently illustrates the "signal processing means" as a receiver and demodulator unit 24. As noted in Applicant's specification, the second antenna 21 receives the radio wave retransmitted by the first antenna 15

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and a signal is produced therefrom and applied to the receiver and demodulator unit 24 (page 5, lines 28-36). Thereafter, the receiver and demodulator unit 24 delivers a binary signal  $\text{sgn}(12)$  representative of the state of the sensor 12, with this signal being associated with the address  $\text{Id}(12)$  of the sensor 12 (*Id.*).

Accordingly, no changes to the drawings are required and Applicant respectfully requests that the Examiner withdraw the objection to the drawings.

#### **V. Cited References**

With respect to the signed and initialed copy of the Form PTO-1449 attached to the Office Action dated April 1, 2003, the Examiner failed to initial by the two references listed under "Other Documents". Thus, Applicant respectfully requests the Examiner to provide another copy of the Form PTO-1449 clearly indicating the disposition of these two references in the next correspondence.

#### **VI. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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